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Monthly Extension Update Newsletter

Forestry, Wildlife, and Fisheries

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9-1-2006

## Update Newsletter September 2006

Department of Forestry, Wildlife and Fisheries

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### Recommended Citation

Department of Forestry, Wildlife and Fisheries, "Update Newsletter September 2006" (2006). *Monthly Extension Update Newsletter*.  
[http://trace.tennessee.edu/utk\\_updatenews/101](http://trace.tennessee.edu/utk_updatenews/101)

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# Forestry, Wildlife & Fisheries Update Newsletter

*Department of Forestry, Wildlife and Fisheries*  
*Larry Wilson, Interim Department Head*

*September 2006*  
*Website: <http://fwf.ag.utk.edu>*

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## **Dates to Remember**

<b>Sept. 23</b>	Mid-South Fair 4-H Day, Memphis (BB Shooting Contest, Wildlife Evaluation Contest)
<b>Oct.3</b>	Cedars of Lebanon State Park, Central Region 4-H Forestry Contest
<b>Oct. 14</b>	State 4-H Forestry Contest, Knoxville
<b>Nov. 8-9</b>	Tennessee Vegetation Association Annual Meeting, Montgomery Bell State Park
<b>Nov. 11</b>	Tennessee 4-H Shooting Sports Fall Festival Shoot, Henry Horton State Park
<b>Nov. 14</b>	Timber Tax Talk, Overton Co. Forestry Association
<b>Nov. 16 (tentative)</b>	Timber Tax Talk, Morgan County Forestry Association
<b>Dec. 5</b>	Timber Tax Workshop, Cookeville
<b>Dec. 6</b>	Timber Tax Workshop, Fayetteville
<b>Dec. 7</b>	Timber Tax Workshop, Selmer
<b>Feb. (tentative)</b>	Tennessee 4-H Shooting Sports State Volunteer Training, location TBA

## **Welcome New Staff Members**

### **~ Mr. Aubrey Deck ~**

We are very excited to have Mr. Aubrey Deck as part of our staff located at the Western Research and Education Center in Jackson. Aubrey joined our staff in December of 2005 and we are glad to formally introduce him to all our contacts. Aubrey will coordinate the development of a TN Master Naturalist Program, develop and plan the 4-H Wildlife Project as well as state wide programs in wildlife and natural resources management. He will be working with TWRA in the coordination and implementation of the 4-H Shooting Sports Program in Tennessee.

Aubrey received a B.S. at University of Tennessee and a M.S. at Texas A & M University. He brings a wealth of experience to the Wildlife Assistant position. He comes to us from Texas A & M University where he worked as a graduate research technician in a study of feral hogs. Aubrey has done volunteer work with TX 4-H WHEP, Texas Ag. Experiment Station (white-tailed deer study), herpetology study at Texas A&M Extension, white-tail deer study at the University of Georgia, as well as volunteer work here in Tennessee for a TWRA deer study in Oak Ridge. He has worked with the USDA and the Great Smoky Mountains National Park Service and has gained a wealth of knowledge and experience with various wildlife populations.

Please join us in welcoming Aubrey to the Extension staff. When in Jackson, please stop by and say “hi”! Aubrey can be reached at 731-425-4702 or [adeck@utk.edu](mailto:adeck@utk.edu).

### **~ Ms. Kelley Zophy ~**

Please welcome Ms. Kelley Zophy to UT and FWF as the new coordinator of the National Learning Center for Private Forest and Range Landowners. This was the former position of Sam Jackson. She began working with us on September 5, and will be housed in office number 281 in Ellington Plant Sciences Building, Knoxville.

We are excited and pleased to have Kelley on board. She brings a wealth of experience (information technology, communications, people facilitation skills) for the coordinator position. Kelley received a BA in biology at St. Olaf College in MN, served in the Peace Corp in West Africa, and received a MS in Forest Resources at Oregon State this summer. Kelley can be reached at 865-974-2946 or [kzophy@utk.edu](mailto:kzophy@utk.edu).

### **~ Dr. Patrick Keyser ~**

We are also pleased to welcome Dr. Patrick Keyser, Coordinator, Center for Native Grasslands Management. This is a new position and Dr. Keyser has been with us since late this summer and is in office 246, Ellington Plant Sciences Building, on the Knoxville campus. Dr. Keyser comes to us after spending the past 7 ½ years working as a wildlife biologist in forest industry where he managed a nationally recognized wildlife and ecosystem research forest. Prior to that, he spent 14 years working as a wildlife biologist for state fish and wildlife agencies where he focused on private lands technical assistance. This extensive experience and strong research background will help Pat bring leadership to the new Grasslands Center. The Center is being supported through both the Experiment Station and UT Extension with a mission to promote the use of native grasslands in uses as diverse as surface mine reclamation and natural areas restoration, from beef cattle forages to the creation of oak savannahs across the Tennessee and the Mid-South.

Pat can be reached at 865-974-0644 or [pkeyser@utk.edu](mailto:pkeyser@utk.edu).

When in Knoxville, please stop by and introduce yourself to Kelley and Pat and welcome them to the department.

## **What Affects Fall Color?**

Reprint from - <http://www.nps.gov/>

*An unusually **wet late-summer** in the Smokies could lead to an unusual fall color season. Though no one knows for certain what the future will bring, the extra, well-dispersed rain could mean:*

- 1. There may be more leaves on the trees than usual come October.*
- 2. The lack of drought stress may lead to a later color peak.*

*Right now in the Smokies some early individual red maple trees are already putting on a brilliant show at the park's higher elevations.*

*In the lowlands, some sourwood and blackgum trees are peaking and dogwoods are about halfway there. Tuliptrees, black walnuts, and sycamores are just starting to show some gold.*

*The timing of fall color change depends upon so many variables that the exact dates of "peak" season are impossible to predict in advance.*

***Elevation** profoundly affects when fall colors change in the park. At higher elevations, where the climate is similar to New England's, color displays start as early as mid-September with the turning of yellow birch, American beech, mountain maple, hobblebush, and pin cherry. From early to mid-October, fall colors develop above 4,000 feet. The fall color display usually reaches peak at mid and lower elevations between mid-October and early November. This is the park's most spectacular display as it includes such colorful trees as sugar maple, scarlet oak, sweetgum, red maple, and the hickories.*

*Why are fall colors so remarkable in the Smokies? One reason is the park's amazing **diversity of trees**. Some 100 species of native trees live in the Smokies and the vast majority of these are deciduous.*

***How do colors change?** As summer ends, the green pigments in leaves deteriorate, giving other colors a chance to shine. Carotenoids, the pigment that makes carrots orange and leaves yellow, are exposed as the green fades. Reds and purples come from anthocyanins, a pigment that is formed when sugars in leaves break down in bright autumn sunlight.*

## **Answering Fall Color Questions**

*Richard Evans, Director, UT Forest Resources Research & Education Center*

We are coming-up on the season when the public and news media typically call us with questions concerning fall leaf color. The UT Forest Resources Center & Arboretum now has a page on our website which may provide you with a reference to information for answering those fall color questions, and a site which you may want to refer others to for more information. I encourage you explore our new "Fall Color Guide" webpage and, while you are there, check-out the rest of the site, too... click below for the link.

<http://forestry.tennessee.edu/fallguide.htm>

*For more information contact:*

Richard M. Evans, Director  
UT Forest Resources Research  
& Education Center  
865-483-3571  
revans6@utk.edu  
<http://forestry.tennessee.edu/>

## **NOTES FROM THE WEB**

*Kelley Zophy, Coordinator, NLC for Private Forest and Range Landowners*

This month's helpful websites are GIS related. If you are interested in improving your ability to use ArcGIS software, check out the free teaching modules that are offered on this website below. The modules are self-directed and require some investment of time, but are an effective way for busy professionals to become familiar with GIS tools.

<http://training.esri.com/gateway/index.cfm>

For a convenient way to locate spatial datasets which you can use to build maps visit:

<http://clearinghouse1.fgdc.gov/>

For more information, contact Kelley Zophy at 865-974-2946 or [kzophy@utk.edu](mailto:kzophy@utk.edu)

# # #

## **New Extension Publications on Hardwood Silviculture**

*Wayne K. Clatterbuck, Associate Professor, Forest Management and Silviculture*

A new hardwood silviculture Extension publication series is being initiated with six publications that are now available.

SP 675	Managing Oak Decline
SP 676	Oak Shelterwood: A Technique to Improve Oak Regeneration
SP 677	Hardwood Plantations as an Investment
SP 678	Forest Management Strategies to Minimize the Impact of Gypsy Moth
SP 679	Two-Age System and Deferment Harvests
SP 680	Treatments for Improving Degraded Hardwood Stands

Our purpose with these publications is not a rehash of standard silvicultural and management techniques that are discussed in textbooks, but to present new information and technologies based on present science and research information on many conditions encountered in hardwood forests. The primary audiences are forestry professionals, Extension professionals and landowners with some experience in forest management. The publications are the result of several partnerships: the USDA Forest Service, Southern Regional Extension Forestry, Tennessee Dept. of Agriculture, Division of Forestry and the forestry Extension units of the University of Kentucky and the University of Tennessee.

We plan to add several publications per year to the series known as *Professional Hardwood Notes*. Each publication is a regional peer-reviewed technology extension publication of the Southern Regional Extension Forestry. Possible topics for 2006-2007 include crop tree release, uneven-age management, midstory release to develop natural regeneration, and site preparation for artificial regeneration (herbicide technologies). If you have other subjects/topics on hardwood silviculture and management that you would like addressed in this series,

Hard copies of these publications will be mailed to Extension offices and Division of Forestry offices sometime during July. They will also be available on the web at the FWF Extension web address (<http://fwf.ag.utk.edu>). Contact me or our office in Knoxville if you would like a hard copy of these publications.

For more information contact Wayne Clatterbuck at 865-974-7990 or [wclatterbuck@utk.edu](mailto:wclatterbuck@utk.edu)

# # #

## **The 4-H Shooting Sports Program**

*Aubrey L. Deck, Extension Assistant, Wildlife Management*

The National 4-H Shooting Sports Program's focus is to develop our youth as individuals and as responsible and productive citizens. The activities of the program and the support of caring adult leaders provide young people with opportunities to develop self-confidence, discipline, responsibility, sportsmanship, teamwork, and much more. This personal growth occurs while gaining knowledge, skills, and lifelong recreation that can be shared with family and friends for fellowship opportunities.

4-H Shooting Sports is a national program that is drawing youth participation from a variety of backgrounds for many reasons. Some want to simply socialize with friends or carry out a family tradition. Others intend to use this opportunity to build skills for a hobby or for healthy competition that may result in scholarship for college education or even Olympic medals. In fact, there are 198 collegiate schools in the United States (five in Tennessee) that have shooting sports programs, many of which offer scholarships and equipment. Over 300,000 boys and girls ranging from 8 to 18 years old with rural and urban upbringings learn a shooting sport with hands on experience each year in the National 4-H Shooting Sports Program. Tennessee 4-H'ers have the opportunity to be trained in safety, ethics, and marksmanship of each discipline: hunting, archery, muzzleloader, rifle, and shotgun. It is important to remember that the program's focus is not to "teach kids how to shoot guns". Rather, as a 4-H program child development is the primary goal of shooting sports. Knowledge and skills gained are a secondary benefit.

With a solid safety record of zero accidents in the state of Tennessee and only one accident in the nation since its establishment in 1975, certified instructors are confident that this is one of the safest and most beneficial youth development program offered. Safety and responsibility are threads in all shooting sports activities. 4-H Shooting Sports deters violence by developing our youth's minds in a healthy manner and rigorously training them how to handle firearms properly to prevent accidents. Statistics provided by the National Rifle Association<sup>1</sup> show that despite the doubled U.S. population and the quintupled number of firearms in existence since 1930, firearm accident deaths in children have decreased 89% since 1985. Less than 1% of children's accidental deaths in the United States during 2002 were linked to firearms. Furthermore, according to Dr. Ron Howard of Texas A & M University, "There is no connection between school violence and firearm education."

The program offers something for everyone, including adults. Adults serving as volunteer leaders are the foundation of the program. Most of the effort is not given by extension personnel, but by citizens willing to sacrifice their time to make a difference in our youth. Volunteers come for many reasons, whether it is retired military or law enforcement personnel that feels they have something to offer, a parent who wants to help their own child's development, or a Samaritan of the community who enjoys investing in our future. Volunteers are the reason this program has been so successful in growing our youth into productive citizens.

The 4-H Shooting Sports Program is one of the fastest growing and safest youth development opportunities in the nation. That is why 4-H Shooting Sports is an ideal opportunity to shape our future by developing young minds in a healthy manner and by instilling safety, responsibility, and ethical behavior. For more information contact your county extension agent or our Tennessee 4-H Shooting Sports State Coordinator and Program Coordinator at:

### **Daniel Sarver**

Extension 4-H Specialist  
4-H Youth Development  
The University of Tennessee  
2621 Morgan Circle, Rm 205  
Knoxville, TN 37996-4510  
Telephone: (865) 974-2121  
Fax: (865) 974-1628  
E-mail: [dsarver@tennessee.edu](mailto:dsarver@tennessee.edu)

### **Aubrey L. Deck**

Extension Wildlife Assistant  
Dept. of Forestry, Wildlife, and Fisheries  
The University of Tennessee  
605 Airways Boulevard  
Jackson, TN 38301-3201  
Telephone: (731) 425-4702  
Fax: (731) 425-4729  
E-mail: [adeck@utk.edu](mailto:adeck@utk.edu)

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<sup>1</sup> Statistics found on NRA website at: <http://www.nraila.org/Issues/FactSheets/Read.aspx?ID=120>. They got information from the U.S. Bureau of the ATF, U.S. Bureau of Census, National Safety Council, National Center of Health Statistics, and Center for Disease Control.

## **Baseball Bats and Other Changing Traditions in Wood**

*Adam Taylor, Assistant Professor, Wood Products Management*

Baseball is a game of traditions and traditionally baseball bats have been made from ash. But, as with all traditions, new trends can arise that will eventually turn into new traditions. Historically, bats were much heavier than they are now - bats even used to be made of oak and hickory. But, in the modern era, ash has been preferred because it provides a nice balance of strength and lighter weight. Barry Bonds recently started a new trend when he set the single-season record for home runs, using maple bats instead of ash. Maple is slightly harder than ash, making for a slightly heavier bat. But Barry Bonds is strong enough to swing it and, as a result of his success, maple has become the most popular species used by the pros.

Many products are traditionally made from one wood species that has properties that make it well suited to the purpose. For example, model airplanes are made from the exceptionally light balsa wood. Tool handles are made from hickory, which is very tough. And walnut has long been a favorite cabinet wood, due to its good woodworking properties and beautiful appearance.

However, some traditional woods are getting more difficult to obtain. A example from history is the destruction of the chestnut trees that supplied a versatile and durable wood. More recent examples include the straight and strong wood from large Douglas-fir or the durable, defect-wood of old cedars. As the wood world becomes more global, and some wood products are more difficult to obtain, exotic and lesser-used wood species will substitute for traditional woods and become more common in everyday use. Yellow poplar, alder and aspen previously were low-value trees but they are becoming more important, and high value, wood species. Modern manufacturing techniques, combined with dark finishes, means that these light-color woods can be substituted for expensive traditional cabinet woods such as cherry and walnut. Foreign woods, with names such as Asian Maple, Brazilian Cherry and Chinese Oak, are showing up in American stores, substituting for domestic species in a number of products.

Tennessee is home to a diverse array of hardwood tree species. New trends in the wood products world mean that all these species might eventually be useful for traditional products. Some species have a long tradition of use in certain products and this has resulted in consistently strong demand and high value for logs: for example walnut, cherry and red and white oak. But, more recently, the trend in favor of light-colored wood for cabinets is increasing the value of the maples. The large foreign market for versatile, affordable wood is increasing demand for yellow poplar. In the future, as the market becomes accustomed to a wider variety of woods, other species such as gum, hackberry and sycamore may become more sought after. Fortunately, Tennessee has an abundant and diverse forest resource. Forest management that favors high-quality sawlogs will produce valuable products, whatever the future trends and traditions in the wood world.

*For more information, contact Adam Taylor at 865-946-1125 or [AdamTaylor@utk.edu](mailto:AdamTaylor@utk.edu)*

##

## **Woody Biofuel - a Future Forest Product?**

*David Mercker, Extension Specialist, Forest Management*

There seems to be momentum in lowering the United States' dependence on foreign oil, while promoting conservation and encouraging more research into renewable, home-grown biofuels. The recently adopted Energy Act and the emerging 2007 Farm Bill both emphasize this issue. A new goal espoused by many in Washington, DC is the 25x'25 Initiative. With this, it is hoped to achieve 25% of America's energy supply from renewable biomass by the year 2025.

Forest land, both existing and those lands yet to be planted to trees, could contribute if woody biofuel markets emerge, particularly in areas where traditional small-sized pulp markets are disappearing (or prices have stagnated or deflated due to over-supply). Without strong timber markets, desire for landowners to practice forest management fades. With strong markets, over-stocked younger forest stands are thinned and poor quality ones are improved via commercial timber harvesting. The material removed could be used for biofuels. Converting woody biomass to useful biofuel lessens our dependency upon foreign oil, provides income to forest landowners, improves employment for loggers, uplifts the wood industry, and allows forests to be managed in a healthy, sustainable manner. These five benefits translate to a major win.



Over the past 20 years, millions of acres of highly erodible farm land have been planted to trees, mostly through the Conservation Reserve Program (CRP) and the Wetlands Reserve Program (WRP). Early, at least in the southeastern US region, the emphasis of these programs was on establishing Loblolly pine (*Pinus taeda*). More recently, bottomland fields are being restored to mixed hardwoods. As these pine and hardwood stands develop, eventually they will need thinning in order to maintain vigor, health, and volume growth. Thinning can either occur naturally by allowing weaker trees to die (a slow process that doesn't always favor the desired trees), or it can occur artificially. Artificial thinnings are either pre-commercial (in which foresters simply kill trees) or they are commercial. The last option is normally preferred, particularly when the benefits are considered. If the woody biomass generated by commercial thinnings can be used to produce renewable biofuel for the benefit of society, that would be rejoicing news.

The operative word is RENEWABLE, miraculously renewable. Professional foresters understand the science of growing the trees. The challenge of economically converting trees to biofuel is now handed over to the chemists and economists. Keep your attention on the 25x'25 Initiative.

*Reference: Keith Argow, President, National Woodland Owners Association*

*For more information contact David Mercker at 731-425-4703 or [dmercker@utk.edu](mailto:dmercker@utk.edu)*

###

### **Fragmenting Forests and the Wood Industry**

*Adam Taylor, Assistant Professor, Wood Products Management*

Nonindustrial private forests (NIPFs) are an important part of the timber supply chain. Roughly 70% of the forests in Tennessee are owned by individuals, and 43% of are on parcels of 100 acres or less. As these small forests areas become even more common, there are questions about the outlook for log supply for the wood products industry.

The forest industry has traditionally managed large timber tracts to supply their mills; however, many of these lands are being sold. The expansion of urban areas into the surrounding farms and forests is also resulting in the breakup of forested areas. As the forest base is broken up into smaller "parcels", there is concern about the stability of the log supply for the wood products industry.

Recent research suggests that some degree of forest parcelization may not have a large impact on timber supply. An analysis of the forest industry in Michigan found that mills that were dependent on NIPFs for logs were able to compete effectively in the marketplace. These companies in general were able to harvest the same types of products and to be as profitable as the mills that depended on large forest holdings.

Unfortunately, the study also found that such firms harvested less intensively and were more likely to harvest profitably on smaller stands. This suggests that some of these stands may be being high-graded: cutting only the high-quality trees and leaving the poorer ones behind. So, although smaller forest owners may be able to supply the wood products industry, it isn't necessarily true that they do a better job of forest management. There is also a concern about the practical lower size limit for a "working" forest that can supply the wood industry. Very small stands may not be economically practical for loggers.

Tennessee already has a significant portion of its wood resource in small, private forests. This resource supplies the large and important wood products industry in the state. As the trend of forest fragmentation continues, and demand for wood products increases, it will become increasingly important to continue proper forest management practices.

*For more information, contact Adam Taylor at 865-946-1125 or [AdamTaylor@utk.edu](mailto:AdamTaylor@utk.edu)*

###



### **No Forest Management Can Also Have Consequences**

*Wayne K. Clatterbuck, Associate Professor, Forest Management and Silviculture*

Recently, I visited an eastern white pine plantation that was initiated by Dr. Thor in 1970 as part of his tree improvement research. This planted stand has been left alone for 35 years without any intermediate management. Trees were planted at various close spacings ranging from 4 x 8 to 6 x 8 feet, due to the experimental design of the tree improvement study.

Although, some mortality has occurred, about 400 trees per acre remain. The average tree diameter is 9 inches, tree height of overstory trees averages 78 feet, stand basal area ranges from 160 to 220 square feet per acre. Site index for white pine is estimated to be 110 feet in 50 years. Needless to say, the stand is severely overstocked, the trees are tall and skinny, and one easily could interpret that the trees are declining rapidly.

Perhaps, the most telling characteristic of these trees is that the live crown ratio is between 15 and 20 percent. Generally, our guideline for live crown ratios for healthy trees is between 33 and 50 percent. A balance is usually associated between the crown area and the root system of the tree. The reduced crown area usually leads to a diminished root system.

Strong winds have recently up-rooted many of these trees, causing a domino effect as one tree leans and pushes over adjacent trees. The root system is just not large enough or strong enough to support these trees. Even with an intermediate operation such as thinning under these stressed conditions, the remaining trees probably do not have the capacity to resume growth. Trees are more susceptible to windthrow in open conditions, especially with reduced root systems.

Thus, no management has created a stand where little can be done to maintain or improve it. If thinnings were conducted at the appropriate times at much earlier ages, the white pine would be capable of growing to much larger sizes and the rotation would be extended. In the stand's current state, there is little that can be done to rehabilitate it. However, we will probably try to progressively thin the stand by cutting and removing a few trees at frequent intervals. We hope to gradually build additional crown area and root system of the remaining trees, without initiating additional loss through windthrow. The question that remains is whether the trees have declined to the point where they do not have the capacity to respond to additional growing space.

###

### **Logging Damage To Leave Trees Following Commercial Harvesting**

*Wayne K. Clatterbuck, Associate Professor, Forest Management and Silviculture*

Partial cutting in mature hardwood stands often causes physical damage to residual stems through felling and skidding resulting in a decline in bole quality and subsequent loss of tree value. An ongoing research study at the UT Forest Resources Research and Education Center at Oak Ridge assessed the logging damage to residual trees following commercial harvesting in a mature oak-hickory stand cut to three overstory basal area retention levels: 12.5, 25 and 50 percent. These treatments were replicated three times in north-facing, south-facing and ridgetop blocks. These stands were fully stocked with basal areas averaging 90 to 125 square feet of basal area, with average diameters and heights of overstory trees averaging 20+ inches and 95 feet, respectively.

The logging operation caused widespread damage to residual trees, with more than 76 percent of the trees experiencing some logging damage regardless of treatment and 45 percent of bole-damaged trees rated as severe damage that would ultimately decrease the future value of the tree. More tree damage occurred at the greater basal area retention levels.

More careful logging would have reduced the amount of residual stem damage associated with partial harvesting in this study. Some damage is inevitable and acceptable, especially in fully stocked, large diameter stands. However, the more trees that remain in the stand, the greater chance that bole and crown damage will occur. Thinnings and partial harvests have many advantages in reducing stand density, favoring certain species, increasing diameter growth and having a more pleasing appearance when compared to clearcutting. The potential detrimental damage to residual trees also should be considered. Reduction of butt log grade and the loss of potential tree value are serious considerations with the long-term effects of the future stand. Placing a bounty on residual tree damage in timber sales contracts could provide an incentive to reduce logging damage to residual trees.

*For more information contact Wayne Clatterbuck at 865-974-7990 or [wclatterbuck@utk.edu](mailto:wclatterbuck@utk.edu)*

###

## **Tree Protection**

*Larry Tankersley, Extension Specialist, Forest Management*

Few things make me smile like the question, How much room should I give my trees when I build my new house. I smile one because I know I dealing with a thoughtful person who is thinking ahead. Generally we get calls a few years after the house is built with the question, “ what is wrong?”.

The other reason I smile is the rise I get out of people when I tell them to “ give it all the room you can.” The drip line is a conspicuous place as we can observe directly the crown radius, i. e. how far we are from the trunk. Depending on the ‘spread’ of the tree however this may not be enough room. Forest grown trees for instance will have fairly narrow crowns with roots that may spread up to 5 or 6 times the drip line. However when we look at an open grown oak with a crown radius of 40 - 50 feet, we could assume the drip line encompassed a large percentage of the root system.

I like to consider tree roots in concentric zones around the tree. As we move closer to the trunk, we cut off roots in the outer rings. Trenching close to a tree can remove a large portion of the root system. A key indicator when digging, depending on how deep we are digging, would be the diameter of the roots that we cut. Larger old trees will have several substantial large diameter roots that are not only hold the tree up but are significant conduits of water and nutrition.

Removing as little as 10-15% of the root system will elicit a response form the tree within a couple of growing seasons. Expect wilting and possibly the death of several branches in the crown, especially during hot dry weather when the tree can not collect enough water to support the entire crown as it did before the trenching. Supplemental water at this time may not help as the water collection system has been severed from the tree. As the percentage of the root system affected increases the more response we get from the tree. It should be noted also that some trees will survive removal of up to 70 or 80% of the root system. Trees like sweetgum, blackgum, sourwood, sassafras, post oak, maples, and young trees, will dieback to a point were the remaining root system is adequate to support the reduce crown. The tree will survive and grow from this point. Typically older trees, oaks and hickories will not be as reactive and will likely perish as stored food is burned during the next growing season(s).

When we decide how much room we can give our trees, barriers used to exclude operations near the trunk should be extended outward to protect the root zone. I’ve seen wood nailed to the tree trunk to prevent the bobcat from bumping the tree, while the concrete truck rinsed in the shade of the tree. Total exclusion of all equipment and construction materials from the root zone will make a difference.

Other ideas for protecting your trees during construction include:

- \* Prune if you can anticipate the height of equipment and or trucks.
- \* Limit grade changes and trenching. Consider drilling.
- \* If the tree is in the shade now anticipate heat stress when exposed. Also consider “new” exposure to wind.
- \* Landscaping also affects trees. A nice layer of topsoil will really make the grass pretty, but is also smothers the trees that were there first.
- \* Fertilizer may or may not be necessary but could help rebuild damage tissue or improving the trees vigor before and after construction.
- \* Water, Water, Water, for several years as the trees adjust to the new surrounding.

There is lots of information about protecting trees **before** and during construction. Consider once the house is built and the tree has to be removed, the removal cost is considerably greater than if we had cleared the tree before we build the house.

For more information contact: *Larry Tankersley at 865-974-7977 or [ltanker1@utk.edu](mailto:ltanker1@utk.edu)*

###

**Tree Owner Rights**

*Larry Tankersley, Extension Specialist, Forest Management*

Others are not allowed to harm our trees according to trespass law. Persons cutting, removing or otherwise harming our tree(s) can be liable for double or triple the value of the tree if trespass is upheld

Typically the most contentious “trespass” is tree trimming or right of way maintenance by utilities or municipalities.

In a tree trimming dispute first determine whether the utility or service has the authority to trim or remove trees. Persons using a right of way generally have no rights unless granted by the jurisdiction’s authority and rights for proper use of the streets.

If authority exists determine whether or not an easement is present on your property which would allow the public utility to enter the land. A landowner whose title extends to the center of the street has an interest in the trees and authority to the utility to use the street does not empower or authorize them to damage the trees or otherwise appropriate any of the landowners property without compensation. Contrast this situation to one where the municipality/jurisdiction reserves the rights to use your land for streets.

Generally the easement holder has the right to remove obstructions located within the scope of the easement that threaten the full use of that easement. The easement holder likewise has a duty to remove those obstructions in a way that causes the least destruction to the landowner’s property. This is accomplished by doing only what is “reasonable and necessary” to insure the easement holder’s full enjoyment of the easement. Reasonable and necessary are often subjective and depend on the facts and circumstances of each case. Tree trimming standards do exist for most situations.

Many cases make it clear that a landowner’s property interest in trees is subservient to a public utility company’s right to remove and trim trees which interfere with the necessary and reasonable operation of the public utility. The right of the general public to receive the benefits public utilities provide supercedes the rights of property owner to have trees located on the landowners property untouched.

*For more information contact: Larry Tankersley at 865-974-7977 or [ltanker1@utk.edu](mailto:ltanker1@utk.edu)*

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**Hardwood Analysis and Trends (HAT) – September 2006***David Mercker, Extension Specialist, Forest Management*

Typically in **HAT** we address month-to-month changes in lumber pricing for six hardwood species common to Tennessee. The reporting is summarized with permission from the Hardwood Market Report, Memphis, TN. Hardwood lumber pricing is multifaceted, varying according to:

1. the species of hardwoods – red and white oak species are typically worth more than less desirable species such as hackberry;
2. the lumber grade – FAS (firsts and seconds) have more value than #2A;
3. thickness of cut – boards are cut in thickness of ¼ inch increments, for instance 4/4 (4-quarter) lumber is typically worth less per board foot than 8/8 (8 quarter) lumber.

Lumber pricing is regularly tracked, but difficult for landowners to interpret, especially when attempting to put a value on an individual tree or trees in a forest. To arrive at the value of a standing tree (called stumpage price), the lumber price must be reduced by subtracting the costs of producing the lumber. These costs include: milling, hauling, and logging. Such costs are variable, not easily determined, and are a function of more dynamics than can possibly be addressed here.

The focus of **HAT** is to give readers some insight into lumber price trends. Normally, lumber price trends can reflect stumpage price trends, but not always. For instance, when red oak lumber price falls 3 percent in a short period, this may or may not translate into a similar price reduction in landowner stumpage price. In most cases, there is a lag that follows in stumpage reduction (if one comes at all). Most experienced consulting foresters will have accurate knowledge of local stumpage prices.

The following is a summary of lumber price trends since the inception of HAT (75 weeks ago) and a more recent 15 week trend. Considerable price reduction has occurred in most species over the 75 week period, but stabilization has occurred more recently. Please feel free to contact me if you have specific questions.

**Percent Price Change in 4/4 #1 Common Lumber** (Appalachian Region)

<b><u>Species</u></b>	<b>75 Week</b>	<b>15 Week</b>
	<b><u>Price Change</u></b>	<b><u>Price Change</u></b>
Red Oak	-15.5	0
White Oak	-17.1	0
Tulip Poplar	+5.1	0
Black Cherry	-12.1	0
Hard Maple	-2.8	-3.2
Black Walnut	+14.6	+5.1

Summarized with permission from Hardwood Market Report, Memphis, Tennessee.